JDI Quality Assurance Guideline

For Supplier, 2023

Japan Display Inc.

1/1/2023

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1. Introduction

This guideline is to summarize the items that Japan Display Inc. and its affiliated companies (collectively “JDI”) request their suppliers (“Supplier”) to understand and cooperate with in its Quality Management System. For suppliers managed by JDI customers, requests may be made separately as necessary. Regarding the occurrence of new additional requirements or specific requirements, we will make a separate request to the target supplier individually.

This guideline specifies basic requirements for the Quality Management System based on ISO9001 and IATF16949, and specific requirements for quality assurance, quality control, product safety and control of non-conformities related products and processes/services to be provided (collectively, “Products”).

JDI expects that the Supplier will make efforts to continue its quality improvement activities as well as to develop and maintain its quality management system for products and processes/services to be provided to JDI.

- This guideline shall be used only for transactions with JDI and shall not be used for any other purpose or disclosed to any third party.
- The latest version of this guideline is disclosed on JDI’s website. You have to use the latest version of each form attached to this guideline disclosed on JDI’s website.
- If you have any a concerns or questions, please let your JDI contact know.

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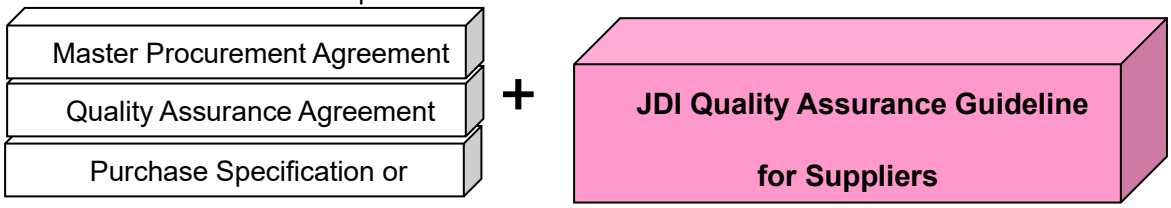
1.1. Purpose of this Guideline

The requirements for the contracts for JDI's purchase of products and processes/services from the Supplier are determined in "Master Agreements (i.e. General Purchase Agreement and Individual Agreements, collectively referred to as the "Master Procurement Agreement")" and the "Quality Assurance Agreement". Moreover, the requirements for the specification of products and processes/services to be purchased are determined in the "Purchase Specification" or the "Service Agreement".

This Guideline defines the quality control methods to be implemented for achieving JDI's requirements.

If the Supplier and JDI entered into a contract or memorandum in which special conditions were defined, such special conditions shall prevail.

Table 1.1 Purpose of this Guideline



1.2. Structure of this Guideline

Chapter1~Chapter3 Overview of this Guideline

Chapter4~Chapter 10 JDI quality requirements based on QMS standards

Chapter11~Chapter22 JDI additional quality requirements

In this Guideline, font styles are used to indicate different items as follows. The Supplier is requested to implement the management for the sections that fall under 1) from the start of a new transaction, and apply the same to the sections that fall under 2) but in a stepwise manner.

1) Headings with normal type font

Mandatory control items required for all suppliers

2) Headings with ◆*Italic font*

control items required according to the Supplier's QMS level

1.3. JDI Basic Concept of Quality Assurance

1.3.1 JDI "Quality Policy"

1) To provide satisfying quality to customers in accordance with Our Mission.

2) To be responsible for our quality, act with speed and honesty, and make further improvements.

3) To be compliant to requirements and continually improve the quality management system.

1.3.2 JDI Basic Concept of Quality Assurance for Purchased Products (products and processes/services)

The JDI "Quality Policy" cannot be achieved without the cooperation of Suppliers that provide products and processes/services. JDI believes that it is essential to further strengthen mutual collaboration and maintain confidence in each other with the same quality concept.

In order to gain JDI customer confidence and mutual benefits, Suppliers need to understand JDI's basic

concepts in quality assurance as described below.

1) Suppliers shall be responsible for manufacturing products and processes/services which satisfy JDI's quality requirements specified in the latest "Purchase Specification" and "Service Agreement" at the time of order receipt and delivery according to the agreed on schedule based on the "General Purchase Agreement" and "Quality Assurance Agreement".
2) JDI fundamentally purchases only quality-assured products and processes/services from those Suppliers who are able to maintain stable quality on a continuous basis.
3) The Supplier, therefore, needs to establish and maintain a quality assurance system which ensures delivery of quality-assured products and processes/services.
4) Suppliers are requested to carry out continuous quality improvement activities to accurately understand the changes in quality and quality risks though precise control utilizing improvement tools.
5) JDI is willing to support and work together with the Supplier for enhancement of its quality assurance system as well as continuous quality improvement.
6) JDI requests Supplier to deliver 100% of the supplied Products with no defective items and to make improvements while setting targets.
7) Suppliers shall, at their own responsibility, convey the purpose of this guideline to external providers in general and request their cooperation with our quality policy.

1.4. Standard of Quality Management System

1.4.1. Development of Quality Management System

Suppliers shall develop a quality management system in accordance with this guideline. Suppliers need to obtain an ISO9001 Standard Certificate. *And JDI shall require Suppliers to obtain an IATF16949 Standard Certificate. For Suppliers who have difficulty obtaining IATF16949 Standard Certificate, JDI request to gradually improve the level of quality management system in order to comply with IATF16949.* However, if a Supplier is acting as a trading company, it is the Supplier's responsibility to have the manufacturer obtain an ISO9001 Standard Certificate *or IATF16949 Standard Certificate*. If the maintenance/continuation of ISO9001 Standard Certificate *or IATF16949 Standard Certificate* is found to be difficult due to suspension, expiration, or cancellation, etc., immediately let your JDI contact know.

2. Reference Standard

(1) ISO9001:2015 International standard on quality management systems
(2) IATF16949:2016 Quality management standard for the automotive industry

3. Definitions

Terms and definitions used in this Guideline refer to those provided in ISO9000:2015 and IATF16949:2016.

The terms of this guideline are defined as follows.
External provider: Supplier's material purchase source and outsource destination

In-vehicle related products: Products, processes, and services of suppliers that affect our in-vehicle products

Consumer-related: Supplier's products, processes, and services that affect consumer products other than our in-vehicle products

QMS standard: Quality management system standard. This guideline specifically indicates ISO9001 and IATF16949.

4. Context of the organization

4.1. Understanding the organization and its context

In order to achieve the results that meet JDI requirements, Suppliers shall identify the responsibilities of the organization and internal and external issues corresponding to medium- to long-term business policies, etc., reflect them in the Quality Policy and quality objectives, etc., and monitor them.

a) For issues, determine the specific risks and opportunities, and then plan actions to address them.

b) For external factors, consider the issues for all possible factors without limiting the scope.

c) For internal factors, consider the issues mainly for factors hindering the improvement of QMS performance and effectiveness.

4.2. Understanding the needs and expectations of interested parties

Suppliers shall understand the needs and expectations required for it, and determine the impact or potential impact of JDI requirements, JDI customer requirements, and statutory and regulatory requirements on the capability of the organization. Suppliers shall also monitor and review the information on requirements as necessary.

4.3. Determining the scope of the quality management system

In order to determine the scope of its QMS, Supplier shall define the scope of activities of each organization, and ensure its continued availability as documented information. When establishing the scope of activities, the following items a) through c) shall be considered.

a) Issues specified in 4.1

b) Requirements of interested parties specified in 4.2

c) Supplier’s products and processes/services

4.3.1. ◆Determining the scope of the quality management system - supplemental

Suppliers shall include all support functions in the scope of QMS. However, when part of the design or development cannot be applied to QMS because the output of JDI’s design or development cannot be used as is, etc., the Products to be excluded shall be clearly documented.

4.3.2. ◆JDI-specific requirements

Supplier shall review the status of the responses to all JDI requirements, and include them in the scope of QMS.

4.4. Quality management system and its processes

4.4.1.

Suppliers shall establish, implement, and continually improve QMS that includes processes necessary for products and processes/services, etc. supplied to JDI and their interaction in accordance with requirements of this Guideline. When implementing QMS, the following items a) through h) shall be included.

a) Determination of inputs needed for processes and output expected by processes

b) Determination of the order of and interaction between processes

c) Determination and application of criteria and methods for monitoring the operational status of processes

d) Determination and provision of resources needed for processes

e) Determination of responsibilities and authorities of processes

f) Determination of actions to address risks and opportunities for each process in accordance with 6.1

g) Consideration of changing processes as necessary (see Section 8.3.6)

h) Continual improvement of processes and QMS

4.4.1.1. ◆Conformance of products and processes

Products and processes/services, etc. supplied to JDI by the Supplier (including outsourced suppliers) shall be managed to ensure compliance with requirements of JDI and the relevant statutory and regulatory requirements.

4.4.1.2. ◆Product safety

Supplier shall establish documented processes, including at least the following items a) through m), for product safety related to products and production processes.

a) Identification of the statutory and regulatory requirements for product safety

b) Requirements of the item a) notified by JDI

c) Special approval of D-FMEA

d) Identification of product safety characteristics

e) Identification and management of product safety characteristics and characteristics in production

f) Control plan and special approval P-FMEA

g) Implementation of reaction plans in case of process instability or capacity shortage (see Section 9.1.1.1)

h) Establishment of processes for escalating information to JDI and information flow

i) Training for personnel engaged in products and production processes related to product safety

j) Assessment of the potential impact of changing processes and products on product safety and prior approval of changes made

k) Transfer of the requirements with regard to product safety throughout the supply chain

l) Product traceability by minimum production lot

m) Lessons learned from introducing new products

** A special approval is an additional approval by JDI organizations with jurisdiction over product safety*

4.4.2.

Supplier shall implement the following items a) and b).

a) Documentation of procedures needed for the operation of each process

b) Record retention of the process operation results

5. Leadership

5.1. Leadership and commitment

5.1.1. General

Supplier shall ensure the following items a) through j).

a) Explanation of the effectiveness of QMS

b) Matching the Quality Policy and quality objectives with JDI requirements

c) Matching the content of QMS activities with the content of activities carried out for JDI

d) Promotion of process approach and risk-based concept

e) Provision of necessary resources

f) Dissemination of the importance of compliance with the QMS requirements

g) Achievement of the QMS intended results

h) Participation of relevant personnel in QMS

i) Promotion of improvements

j) Determination of responsibilities and authorities of the organization and establishment of a system in which the roles can be fulfilled

5.1.1.1. ◆Corporate responsibility

As part of its social responsibilities, Suppliers shall determine policies that include, at a minimum, prevention of bribery, a code of conduct for employees, and a code of ethics (whistle-blowing).

5.1.1.2. ◆Process effectiveness and efficiency

Suppliers shall perform reviews to evaluate and improve the effectiveness and efficiency of the product realization processes and support processes. The results of review activities shall be included in the input for the management review.

5.1.1.3. ◆Process owners

Suppliers shall appoint process owners who are responsible for the process management of the organization and the relevant outputs. Persons who understand the roles and responsibilities and have competence in executing them shall be appointed to be process owners.

5.1.2. JDI focus

In order to achieve JDI focus, Suppliers shall ensure the following items a) through c).

a) Understanding of and compliance with JDI requirements and statutory and regulatory requirements

b) Actions to address risk and opportunities that would impact JDI

c) Promotion of improvement of JDI satisfaction

5.2. Policy

5.2.1. Establishing a quality policy

Suppliers shall establish, implement, and maintain a Quality Policy that satisfies the following items a)

through d).

a) The content is consistent with Supplier activities

b) An overview of the quality objectives is included, describing how the quality objectives are set within the Supplier's organization

c) A commitment to satisfy requirements is included

d) A commitment to carry out continual improvement is included

5.2.2. Communicating the quality policy

The Quality Policy shall meet the following items a) through c).

a) Maintained as documented information

b) Informed and understood within the Supplier's organization

c) Available to relevant interested parties

5.3. Organizational roles, responsibilities and authorities

In order to ensure the following items a) through e), Supplier shall assign responsibilities and authorities to each role aimed at seamless operation of the QMS.

a) Compliance of the Supplier's QMS with ISO9001 requirements

b) Realization of output expected by processes

c) Reporting to the top management about the performance of the Supplier's QMS and opportunities for improvement (see Section 10.1)

d) Promotion of JDI focus within the entire Supplier organization

e) Maintaining the situation in which QMS fully functions when the Supplier changes QMS

5.3.1. ◆Organization roles, responsibility, and authorities - supplemental

Suppliers shall appoint in writing the personnel with responsibilities and authorities to ensure implementation of the following items a) through h) to meet JDI requirements.

a) Selection of special characteristics

b) Establishment of quality objectives and relevant educational training

c) Corrective action and preventive action

d) Design and development of products

e) Production capacity analysis

f) Logistics information

g) JDI evaluation

h) Information on JDI HP (this guideline, forms and JDI "Quality Policy" etc.)

5.3.2. ◆Responsibilities and authorities for the product requirements and improvement

Suppliers shall ensure the implementation of the following items a) through c).

a) Personnel responsible for product conformity have authorities to stop shipment and production

b) Procedures to segregate nonconforming products and processes and route for reporting nonconformity

are determined not to ship nonconforming products

c) Personnel responsible for product conformity or delegates acting on its behalf are placed at all shifts

6. Planning

6.1. Actions to address risk and opportunities

6.1.1.

When formulating plans for the QMS, “external and internal issues” and “needs and expectations” shall be considered to determine the risks and opportunities to be addressed for the following items a) through d).

a) Achievement of the QMS intended results

b) Increase of desirable effects

c) Prevention and reduction of undesirable effects

d) Achievement of improvement

6.1.2.

Suppliers shall plan the following items a) and b).

a) Actions to address risk and opportunities determined in 6.1.1

b) Methods of implementing the following items 1) and 2).

1) Integration of actions to address risk and opportunities into QMS

2) Evaluation of the effectiveness of the results of such actions

* However, regard to address risk，should avoid the big risks caused by the change of plans, accept risks in pursuit of interests, dislodge the sources of risks caused by technical measures, reduce the risks of failure frequency and influence degree after using FMEA, mitigate the risks caused by decentralization. In order to avoid the new risks caused by various measures, should bear small risks in appearance. Need measures to deal with different influence degree caused by different risks.

6.1.2.1. ◆Risk analysis

Suppliers shall include, analysis risk, learned lessons from product recalls and information obtained from product audits, field returns and repairs, complaints, disposals, and reworks in the Design FMEA and Process FMEA. The results of risk analysis shall be retained as quality records.

6.1.2.2. ◆Preventive action

In order to prevent nonconformity, activities to eliminate potential factors shall be determined and implemented. Preventive actions shall be determined according to the degree of impact. In order to reduce adverse effects, Suppliers shall implement the following items a) through f).

a) Identification of potential nonconformity and causes

b) Evaluation of the necessity of actions to prevent the occurrence of nonconformity

c) Determination and implementation of necessary actions

d) Recording of actions taken

e) Review of the effectiveness of the items a) through d)

f) Utilizing lessons learned from corrective actions as organizational knowledge

6.1.2.3. ◆Contingency plans

Suppliers shall implement the following items a) through g) as contingency plans. In addition, contingency plans shall specify about a process to verify that JDI's requirements are being met when production stops and when regular shutdown processes cannot be executed properly.

a) Determination and evaluation of internal/external risks for all production processes and infrastructure necessary, as well as specific infrastructure, for ensure compliance with JDI requirements and the stable supply of products.

b) Determination of contingency plans for the impact on JDI and risks

c) Preparation of contingency plans for continued shipment (failures of main equipment (see Section 8.5.6.1.1), issues of External providers products and outsourced products and processes/services, natural disasters, fire, utility failures, server attacks on information technology systems, labor shortages, and infrastructure disconnections, etc.)

d) Establishment of processes to notify the degree and period of impact on JDI' operations

e) Regular testing of contingency plans (including cyber security test)

f) Review of contingency plans by relevant departments at least once a year

g) Documentation of contingency plans and recording of the approver and change history

6.2. Quality objectives and planning to achieve them

6.2.1.

Supplier shall set the quality objectives that meet the following items a) through g) in functions, hierarchies, and processes related to quality of products and processes/services within its organization, and retain the results as quality records.

a) Consistent with the Quality Policy

b) Measurable

c) Requirements are considered

d) Related to product and process/service conformity and improvement of JDI satisfaction)

e) Monitored

f) Disseminated to interested parties

g) Content is updated as necessary

6.2.2.

In order to achieve the quality objectives, Supplier shall formulate plans that include the following items a) through e).

a) Matters to be implemented

b) Necessary resources

c) Responsible personnel

d) Completion period of matters to be implemented

e) Methods of evaluating the results

6.2.2.1. ◆Quality objectives and planning to achieve them - supplemental

Supplier shall set, establish, and maintain the quality objectives that meet JDI requirements. When setting annual quality objectives and related performance objectives (internal and external), the results of reviews on interested parties and their requirements by the organization shall be considered.

6.3. Planning of changes

When a Supplier changes its QMS, it shall be systematically implemented, taking into consideration the following items a) through d).

a) Purpose of the change and possible results

b) No inconvenience caused to QMS after the change

c) Availability of resources after the change

d) Review of responsibilities and authorities after the change

7. Support

7.1. Resources

7.1.1. General

Supplier shall prepare resources necessary for establishing, implementing, maintaining, continually improving its QMS, taking into consideration the following items a) and b).

a) Capabilities of and the constraints on existing resources

b) Resources need to be obtained from external providers

7.1.2. People

Supplier shall determine the competence required for effective implementation of its QMS, operation of processes, and management, and secure necessary competence.

7.1.3. Infrastructure

Suppliers shall determine, provide, and maintain infrastructure, including the following items a) through d), necessary for operating processes to achieve product and process/service conformity.

a) Buildings and relevant utilities

b) Equipment, including hardware and software

c) Resources for transportation

d) Information and communication technologies

7.1.3.1. ◆Plant, facility, and equipment planning

Suppliers shall formulate and improve plans for plants, facilities, and equipment, including identification of risks using the multidisciplinary approach and mitigation methods. Plant layouts shall optimize material

travel, handling, and value-added use of floor space, and facilitate synchronous material flow. For new products and new operations, manufacturing feasibility evaluation, including production capability plans, shall be implemented.

Suppliers shall maintain the effectiveness of processes, including regular risk evaluation, to integrate changes made to approved processes during approval, maintenance of control plans (see Section 8.5.1.1), and verification of job set-ups (see Section 8.5.1.3).

The results of manufacturing feasibility evaluation and production capacity evaluation shall be the management review input.

7.1.4. Environment for the operation of processes

Supplier shall determine, provide, and maintain environments necessary for the operation of processes and for the achievement of product and process/service conformity, using the following items a) through c) as reference.

a) Social factors (e.g.: non-discrimination, calm, non-confrontational)

b) Psychological factors (e.g.: stress reduction, burnout prevention, mental care)

c) Physical factors (e.g.: temperature, heat, humidity, light, air flow, sanitary conditions, noise)

7.1.4.1. ◆Environment for the operation of processes - supplemental

Suppliers shall reorganize clean workplace and maintain it well-prepared, and maintained condition, to meet the need for products and manufacturing processes.

7.1.5. Monitoring and measuring resources

7.1.5.1. General

Suppliers shall prepare appropriate and trusted resources that meet the following conditions a) and b) for monitoring and measurement used for verification of product and process/service conformity.

a) Appropriate for monitoring and measurement activities

b) Continued to be managed to comply with the objectives

In addition, should keep the evidence of consistency of resources and objectives for surveillance and measurement as quality records.

7.1.5.1.1. ◆Measurement system analysis

In order to analyze variations observed in the results of each inspection, measuring, and test equipment system specified in CP/QC process charts, statistical studies shall be conducted. The analysis methods used and acceptance criteria shall comply with the AIAG MSA Reference Manual. When using other analysis methods used and acceptance criteria, prior approval from JDI shall be obtained, and records shall be retained. MSA studies , shall take major and special characteristics of the product or project precedence, at least all the inspections, measurements and test equipment systems recorded in the CP.QC engineering sheet shall be implemented.

7.1.5.2. Measurement traceability

Suppliers shall prepare and use measuring equipment that meets the following conditions a) through c) to maintain high reliability of the measurement results that could affect products and processes/services. When measuring equipment is found to be inappropriate for the objectives, the previous measurement results shall be assessed for validation, and appropriate actions shall be taken as necessary.

a) Traceability to international or national measurement standards is maintained by regular calibration and verification. In cases where no measurement standards exist, the calibration and verification methods shall be specified in advance, and the results shall be retained as quality records.

b) The calibration and verification status shall be determined and identified.

c) Equipment is protected from adjustment, damage, and degradation that would nullify the calibration status and measurement results.

7.1.5.2.1. ◆Calibration/verification records

In order for the supplier to provide evidence of the management method of the required calibration/verification records, and meet the requirements of laws and regulations, meet the requirements of JDI / internal requirements, the calibration/verification records about all measuring tools, measuring devices and test devices at least required in CP/QC engineering table, should be recorded, and including the following items a) through i).

a) Records of revisions following engineering changes that could affect measurement systems

b) Records of out-of-specification values confirmed in calibration/verification processes before adjustment

c) Records of evaluation of risks to products caused by out-of-specification values

d) Records of confirmation about the appropriateness of previous measurements, when out-of-specification values or failures are found during calibration/verification or measurement

e) Records of notifications made when suspected products or materials have been shipped

f) Records of conformity with specifications after calibration/verification

g) Records of version verification of software used for managing products and processes

h) Records of correcting and maintenance activities for all gauges

i) Records of verification of software related to manufacturing

7.1.5.3. ◆Laboratory requirements

7.1.5.3.1. ◆Internal laboratories

Suppliers shall define the scope of internal laboratories, and maintain the ability to perform the required inspection, test, and calibration. Suppliers shall include the scope of laboratories in its QMS documents, and specify and implement requirements that include at least the following items a) through f).

a) Adequacy of laboratory procedures

b) Competence of the laboratory personnel

c) Product tests

d) Ability to correctly trace services within the scope to relevant process standards (ASTM, EN, etc.)

e) Individual requirements for products and processes/services from JDI

f) Review of relevant records

7.1.5.3.2. ◆External laboratories

Suppliers shall verify that the ability to implement services within the scope defined in advance is maintained when performing inspection, tests, and calibration at external laboratories. For external laboratories, unless otherwise specified by JDI, the Supplier shall use laboratories that conform to ISO/IEC17025 standards, which are general requirements for laboratories and calibration institutions, and equivalent domestic standards (e.g.: China/CNAS-CL01) shall be used, and, for calibration and test reports, require a certificate of attestation bearing the certification mark of a national certification body.

In addition，when calibration activities are carried out according to the manufacturer of the instrument, need to confirm the status of meeting the requirements by internal laboratory (see section 7.1.5.3.1).

7.1.6. Organizational knowledge

Supplier shall determine the knowledge necessary for operating processes to achieve product and process/service conformity. Suppliers shall maintain the knowledge in writing, and make it available to the extent necessary. When new additional knowledge becomes necessary due to changing needs, the methods for acquiring and accessing the additional knowledge shall be determined. As an example, the knowledge may include the following:

1) Intellectual property and knowledge acquired from research/observation/experience, including lessons learned in the past (successful/failure cases), etc.

2) Knowledge necessary for operating processes and knowledge necessary to meet product and service quality requirements

3) Knowledge necessary to respond to changing needs associated to internal/external environmental changes surrounding the business environment

7.2. Competence

Supplier shall implement the following items a) through d).

a) Determination of competence of personnel engaged in work that could affect the quality performance of products and processes/services (results and achievements)

(e.g.: Designers, soldering operators, workers engaged in inspection/testing work, workers engaged in calibration work, and first/second party auditors)

b) Placement of competent personnel based on their educational and training history and experience

c) Evaluation of the effectiveness of competent personnel placed

d) Documentation for the implementation of the above items a) through c)

7.2.1. ◆Competence - supplemental

Suppliers shall establish and maintain documented processes for identifying the training and educational needs, including awareness (see Section 7.3.1), and competence of all personnel engaged in activities that could affect quality. Suppliers shall confirm competence of personnel to be engaged in certain work, taking into consideration meeting JDI requirements.

7.2.2. ◆Competence-on-the-job training

Suppliers shall provide on-the-job training for personnel engaged in work affecting conformity with product requirements, internal requirements, and statutory and regulatory requirements according to the complexity of work. Personnel engaged in work directly affecting quality shall be informed of the impact of nonconformity with quality requirements on JDI.

7.2.3. ◆Internal auditor competency

Suppliers shall specify internal auditor competency and if applicable lecturer of internal auditor education competency taking into consideration JDI requirements, and maintain a list of qualified internal auditors. Suppliers shall verify that qualified internal auditors have fully understood the following a) through h).

a) Understanding of the process approach-based audit methods with due consideration for risks

b) Understanding of JDI' requirements

c) Understanding of applicable QMS standards (ISO9001, IATF16949, etc.)

d) Understanding of manufacturing processes of the audit targets, including PFMEA and CP/QC process chart, etc.

e) Understanding of requirements of core tools (MSA, SPC, FMEA, PPAP, APQP) used by the audit targets

f) Understanding how to plan, implement, report, and close findings of internal audit

g) The number of experiences in conducting audits annually

h) Knowledge of requirements based on internal and external changes

7.2.4. ◆Second-party auditor competency

Suppliers shall verify that second-party auditors have knowledge of the audited process and competence equivalent to that of internal auditors (see Section 7.2.3).

7.3. Awareness

Suppliers shall ensure that all personnel involved in its products and processes/services are aware of the

following items a) through d).

a) Quality Policy

b) Relevant quality objectives

c) Contribution to the effectiveness of QMS

d) Meaning of nonconformity with QMS requirements

7.3.1. ◆Awareness - supplemental

Suppliers shall ensure that all employees are aware of the impact on quality of products and processes/services and importance of achieving, maintaining, and improving quality.

7.3.2. ◆Employee motivation and empowerment

Suppliers shall maintain documented processes that motivate employees to achieve quality objectives, to make continual improvements, and to create an environment to promote innovation. These processes shall include the promotion of quality and technological awareness throughout the Supplier's entire organization.

7.4. Communication

Suppliers shall determine the following items a) through e) to enable smooth communication with internal and external interested parties related to QMS.

a) Content of communication

b) Period and frequency of communication

c) Person to communicate with

d) Methods and means of communication

e) Person making communication

7.5. Documented information

7.5.1. General

Suppliers shall include the following items a) and b) to its QMS by appropriately adjusting them.

a) "Documented information" required by applicable QMS standards (ISO9001, IATF16949, etc.)

b) "Documented information" deemed necessary for the effectiveness of QMS

7.5.1.1. ◆Quality management system documentation

Supplier shall create and maintain quality manuals that include the following items a) through d), and a series of supplementary documents.

a) Scope of QMS, including the details of exclusions

b) Documented processes

c) Management methods, degree, order, and inputs and outputs of outsourced processes

d) Matrix indicating the correspondence of JDI' requirements with the Supplier's QMS

7.5.2. Creating ad updating

Supplier shall ensure the implementation of the following items a) through c) in creating and updating documented information.

a) Appropriate identification and description (title, date, creator, reference number, etc.)

b) Appropriate format (language, software, tables and figures, etc.) and media (paper, electronic media, etc.)

c) Appropriate review and approval of the suitability and adequacy

7.5.3. Control of documented information

7.5.3.1.

Documented information required by the Supplier's QMS and QMS standards (ISO9001, IATF16949, etc.) shall be managed to ensure the following items a) and b).

a) Documented information is available when and where needed

b) Documented information is sufficiently protected

7.5.3.2.

Suppliers shall ensure the implementation of the following items a) through d) in managing documented information, including external documents. Suppliers shall retain/manage records related to quality of products and processes/services for at least three (3) years after creation. In addition, where requested by JDI to submit these records, etc., Supplier shall promptly respond.

a) Distribution to users and granting of access privileges

b) Retention and preservation in a legible condition

c) Version management for changes

d) Protection from unintended alteration, and appropriate disposal

7.5.3.2.1. ◆Record retention

Suppliers shall specify the record retention methods that meet the requirements of JDI, laws and regulations, and its QMS. Production part approval, tool records, product and process design records, purchase order documents, contracts, and their amendments that for consumer related records shall be retained for one (1) year longer than the validity period of the product and process/service requirements, unless otherwise specified by JDI or regulatory authority, and that for in-vehicle retated records retained for (15) years.

7.5.3.2.2. ◆Engineering specifications

Suppliers shall specify processes (content review, distribution, and implementation procedures, etc.) addressed in all engineering standards and specifications presented by JDI. For change orders, changes to product design and changes to processes shall be referred to requirements of 8.3.6 and 8.5.6.1, respectively. Records of the date of change made to production shall be retained, and updated documents shall be used for implementation. Changes shall be reviewed within 10 working days after receipt to an extent possible

8. Operation

8.1. Operational planning and control

Supplier shall implement the items a) through e), including outsourced processes, and operate and manage processes necessary for compliance with the product and process/service requirements and QMS in accordance with the plans (Chapter 6). When changing the plans (including incidental changes), Suppliers shall carry out sufficient monitoring and review the results to prevent harmful effects from occurring as necessary, take measure to mitigate harmful effects when needs.

a) Determination of the product and process/service requirements

b) Setting of acceptance criteria for products and processes/services

c) Determination of resources needed to achieve conformity with the product and process/service requirements

d) Management of processes in accordance with the criteria in b)

e) Specification of procedures needed for the following objectives and retaining the results

1) Demonstration of the results of processes being implemented as planned

2) Demonstration of conformity of products and processes/services with requirements

8.1.1. ◆Operational planning and control - supplemental

Suppliers shall include the following items a) through e) in product realization plans.

a) Product requirements and engineering specifications

b) Logistics requirements

c) Manufacturing feasibility

d) Project plans (see Section 8.3.2)

e) Acceptance criteria

8.1.2. ◆Confidentiality

Suppliers shall ensure maintaining confidentiality of products contracted with JDI, projects, and relevant product information.

8.2. Requirements for products and services

8.2.1. Communication with JDI

Suppliers shall obtain the following items a) through e) through communication with JDI, and provide information to internal interested parties.

a) Information on specifications required by products and processes/services

b) Information on inquiries, contracts, orders, and their amendments

c) Information on product and process/service feedback

d) Handling and processing of JDI property

e) Certain requirements for the handling of unforeseen circumstances

8.2.1.1. ◆Communication with JDI - supplemental

Written or oral communication shall be conducted in the language agreed on by JDI. With regard to PC language and recording media, etc., the ability to communicate information in the format specified by JDI shall be maintained.

8.2.2. Determining the requirements for products and processes/services

When determining the requirements for products and processes/services supplied to JDI, Suppliers shall ensure the implementation of the following items a) and b).

a) Items to be included in the product and process/service requirements

1) Applicable statutory and regulatory requirements

2) Items that the Supplier deems necessary

b) Ability to meet item a) above

8.2.2.1. ◆Determining the requirements for products and services - supplemental

The requirements to be determined shall include recycling, environmental impact, and characteristics such as Supplier' knowledge on products and manufacturing processes. The requirements for conformity with 8.2.2 a)1) shall include the government safety regulations and environmental regulations on acquisition, storage, handling, recycling, elimination, and disposal of materials.

8.2.3. Review of the requirements for products and processes/services

8.2.3.1.

Suppliers shall maintain the ability to meet the requirements for products and processes/services to be provided to JDI. Suppliers shall review the following items a) through e) before making a commitment to provide products and processes/services to JDI, and take solution about the problem that JDI didn't consider.

a) JDI requirements, including delivery and post-delivery activities

b) Requirements not specified by JDI, but when specified application or intended use are already known, the requirements appropriate for such application/use

c) Supplier internal requirements

d) Statutory and regulatory requirements applicable to products and processes/services

e) Requirements of contracts and orders with conditions different from those previously presented

8.2.3.1.1. ◆Review of the requirements for products and processes/services - supplemental

Suppliers shall retain JDI documents waiving requirements of 8.2.3.1 as documented records.

8.2.3.1.2. ◆JDI-designated special characteristics

Suppliers shall comply with JDI's requirements, including safety and environmental laws and regulations, the specific characteristics specified in future manufacturing projects, and ratify instruments, and about management.

8.2.3.1.3. ◆Organization manufacturing feasibility

With the cost of quotation, suppliers shall determine whether its processes can consistently provide products and processes/services that meet the technical capabilities and production capacity required by JDI or not using the multidisciplinary approach. This feasibility analysis shall be conducted on new manufacturing technologies, product technologies, and modified manufacturing processes and product designs. In addition, the ability to produce products meeting the specifications at the required speed shall also be validated.

8.2.3.2.

Suppliers shall retain the information on the following items a) and b) as quality records.

a) Results of reviews

b) New requirements for products and processes/services

8.2.4. Changes to requirements for products and services

When the product and process/service requirements are changed, the Supplier shall ensure that the relevant documented information is amended and that relevant personnel are made aware of the changed requirements.

8.3. Design and deployment of products and services

8.3.1. General

In order to specify, implement and maintain the design and development processes of products, processes, services and the design & development procedures of manufacturing processes should be documented by using tortoise charts, etc., However, in the design and development process, more attention should be paid to prevention than to detection of defective products for design and development.

8.3.1.1. ◆Design and development planning - supplemental

Shall be applied to the design and development of products and processes/services and manufacturing processes, and attach more importance to prevention than defect detection.

8.3.2. Design and development planning

When determining the design and development stages and management levels related to products and processes/services, Supplier shall consider the following items a) through j).

a) Nature, period, and complexity of design and development activities

b) Required process stages, including design and development reviews

c) Activities for design and development verification and validation

d) Responsibilities and authorities for design and development processes

e) Internal and external resources needed for design and development of products and processes/services

f) Management of interface between personnel involved in design and development processes

g) Participation of interested parties in design and development processes

h) Requirements for the provision of subsequent products and processes/services

i) Management level of design and development processes expected by interested parties

j) Documented information needed for demonstrating that the design and development requirements have been met

8.3.2.1. ◆Design and development planning - supplemental

Suppliers shall use the multidisciplinary approach for the items a) through d) in design and development processes.

a) Project management

b) Consideration of specifications for proposed alternative designs and proposed manufacturing processes

c) Implementation and review of DFMEA

d) Analysis and review of PFMEA, process flow, CP/QC process chart, and SOP, etc.

8.3.2.2. ◆Product design skills

Suppliers shall demonstrate that personnel responsible for product design have the competence to achieve the product requirements and skills for tools and methods specified by JDI.

8.3.2.3. ◆Development of products with embedded software

Suppliers shall also apply product and product/service quality assurance processes to internally developed embedded software. Methodologies for evaluating software development shall be used to evaluate Supplier's software development processes. The self-evaluation methods for software development skills shall be specified by using prioritization based on the risks and potential impact on JDI.

8.3.3. Design and development inputs

Supplier shall determine the requirements essential for certain types of products and processes/services designed and developed without omission or conflict between inputs, taking into consideration the following items a) through e). These design and development inputs shall be specified.

a) Functional and performance requirements

b) Information derived from previous similar designs and developments

c) Statutory and regulatory requirements

d) Standards and norms to which the Supplier makes a commitment

e) Possible results caused by products or processes/services not meeting the criteria

8.3.3.1. ◆Product design input

Suppliers shall specify and review the input requirements, including the following items a) through h), as a result of verifying the content of contracts. In addition, various information obtained shall be provided to interested parties for future similar projects.

a) Product specifications, including special characteristics (see Section 8.3.3.3)

b) Boundary and interface requirements

c) Identification, traceability, and packaging

d) Consideration of proposal alternative designs (e.g.: utilizing tradeoff curves)

e) Risk assessment (including feasibility analysis)

f) Targets for conformity with product requirements

g) Applicable laws and regulations in destination countries specified by JDI

h) Embedded software requirements

8.3.3.2. ◆Manufacturing process design input

Suppliers shall specify and review the input requirements for manufacturing process design, including the following items a) through h). Manufacturing process design shall include the adoption of error-proofing methods commensurate with risks.

a) Product design output data, including special characteristics

b) Targets for productivity, process capability, timing, and cost

c) Proposed alternative manufacturing technologies

d) JDI' requirements

e) Experience from past development

f) New materials

g) Product handling and human engineering requirements

h) Designs for manufacturing and assembly

8.3.3.3. ◆Special characteristics

Suppliers shall specify a process for which the Supplier will conduct risk analysis to identify special characteristics using a multidisciplinary approach, including the following items a) through d).

a) Identification using unique symbols to be reflected in each document

b) Development of the management and monitoring methods for special characteristics of products and manufacturing processes

c) Approval specified by JDI

d) Conformity with symbols and notions specified by Supplier based on JDI definitions and symbols or predetermined symbol conversion tables

8.3.4. Design and development controls

Suppliers shall manage design and development processes to ensure the implementation of the following items a) through f).

a) Determination of the results to be achieved to ensure meeting the functions and performance at each stage planned (product target and manufacturing target)

b) Reviews to evaluate the ability to meet requirements

c) Activities to verify that the design and development outputs meet the input requirements

d) Activities to validate that the resulting products and processes/services meet requirements

e) Necessary actions against issues determined in reviews, verifications, and validations

f) Records of activities of the items a) through e)

8.3.4.1. ◆Monitoring

At the specified stages of design and development of products and manufacturing processes, the analysis results of the measurements defined shall be input for management review. The measurements shall include quality risk, costs, lead-times, and critical paths as necessary. Where requested by JDI, reports shall be made to or agreement shall be obtained from JDI.

8.3.4.2. ◆Design and development validation

Design and development validation shall be performed per JDI' requirements and at the timing required by JDI. Where contractually agreed upon, interaction evaluation shall be conducted within a system specified by JDI.

8.3.4.3. ◆Prototype program

Where requested by JDI, prototype programs and prototype CP/QC process charts shall be made under mass production conditions to the extent possible. Suppliers shall conduct all performance tests, and confirm conformity with the requirements. When they are outsourced, Suppliers shall include the management methods and degree in the scope of the QMS.

8.3.4.4. ◆Product approval process

Suppliers shall establish, implement, and maintain part approval processes specified by JDI. Before submitting part approval to JDI, the Supplier internal approval process shall be carried out for externally provided products and processes/services through 8.4.3. Where requested by JDI, the supplier shall obtain part approval prior to shipment, and retain the records.

8.3.5. Design and development outputs

Supplier shall specify design and development outputs to ensure that the design and development output meet the following items a) through d).

a) Implement verification activities to confirm that the requirements be input are appropriate.

b) Appropriate for subsequent processes related to the provision of products and processes/services

c) Determination of information needed for verifying the performance of products and processes/services, acceptance criteria, and reference information

d) Specification of information essential for intended objectives and safe and appropriate use and provision

8.3.5.1. ◆Design and development outputs - supplemental

The product design output, including the following items a) through j), shall enable verification against inputs and validation. The interim design output shall include technical problems resolved through trade-off processes.

a) FMEA

b) Results of reliability studies

c) Special characteristics of products

d) Error-proofing of product design (e.g.: DFSS, DFMA, FTA)

e) Product definition (3D models, engineering data packages, product manufacturing information, geometric dimensioning and tolerance (GD&T))

f) 2D drawings, product manufacturing information, geometric dimensioning and tolerance (GD&T)

g) Results of product design reviews

h) Guidelines for service failure diagnosis, repair serviceability instructions

i) Service parts requirements

j) Packaging for shipment, identification display requirements

8.3.5.2. ◆Manufacturing process design output

Suppliers shall specify the manufacturing process design output, including the following items a) through n), to enable verification against input.

a) Specification documents, drawings

b) Special characteristics of products and manufacturing processes

c) Identification of input variables to processes that could affect the characteristics

d) Tools and equipment used for production and management, including equipment and process capacity studies

e) Manufacturing process flow chart and layout, including the relationship between products, processes, and tools

f) Production capacity analysis

g) PFMEA

h) Maintenance plans and instructions

i) CP/QC process charts

j) Standardized work and work instructions

k) Process approval acceptance criteria

l) Data concerning quality, reliability, maintainability, and measurability

m) Identification of error-proofing and verification results

n) Methods of rapid detection, feedback, and repair of product and manufacturing process nonconformities

8.3.6. Design and development changes

Suppliers shall identify and review changes made during or after design/development and retain the records of the following a) through d) to an extent possible to ensure not to adversely affect conformity with requirements.

a) Design and development changes

b) Results of reviews

c) Permission for change

d) Actions to prevent adverse effects

8.3.6.1. ◆Design and development changes - supplemental

Suppliers shall evaluate all potential changes to designs after product approval, and internally approve them before applying the changes. After internal approval, unless specifically directed by JDI, Supplier shall obtain JDI' approval before applying the changes. For products with embedded software, the revision levels of software and hardware shall be retained as part of change records.

8.4. Control of externally provided processes, products, and services

8.4.1. General

Suppliers shall verify that externally provided products and processes/services conform to requirements. In addition, where externally provided products and processes/services fall under the items a) through c), the methods of controlling them shall be defined.

a) Where external provider's products, services are intended to be embedded in Supplier products and processes/services

b) Where products and processes/services are directly provided from the external providers acting on behalf of the Supplier

c) Where processes or part of processes are externally provided as a result of the Supplier's decision

Suppliers shall specify and operate the criteria for selecting external providers that provide products and processes/services in accordance with requirements, and for monitoring, evaluating, and re-evaluating their performance. Suppliers shall retain actions arising from these activities and evaluations as quality records.

8.4.1.1. ◆General - supplemental

Products and processes/services to which all products and processes/services that could affect JDI requirements are externally provided, including sub-assembly, sequence, selection, screening, rework, and calibration, etc., shall be included in the scope of 8.4.

8.4.1.2. ◆External provider selection process

Suppliers shall specify and operate selection processes using the selection criteria requiring the following items a) through e) and considering the following items 1) through 11) to the extent possible.

a) External provider product conformity, evaluation of supply risk of interruption in supplying products to JDI

b) Quality, delivery performance

c) External provider QMS evaluations

d) Determination by agreement among relevant departments

e) Where applicable, evaluation of software development skills

1) Scale of business for JDI (total amount and percentage of total business)

2) Financial stability

3) Complexity of purchased products, materials, and services

4) Skills needed for products and processes/services

5) Adequacy of available resources (e.g.: human resources, infrastructure)

6) Design and development skills, including project management

7) Production capacity

8) Change management processes

9) Business continuity plans (e.g.: disaster response, contingency plans)

10) Logistics processes

11) Customer services

8.4.1.3. ◆JDI-designated external providers

Where JDI specifies external providers, Supplier shall purchase products, materials, and services from the specified sources. Unless specially agreed on between JDI and the Supplier, all requirements of 8.4 (excluding 8.4.1.2) shall be applied.

8.4.2. Method and extent of control

Suppliers shall control the following items a) through d) to ensure that externally provided products and processes/services do not adversely affect products and processes/services to be provided to JDI.

a) Control of externally provided processes by including them in the scope of the Supplier's QMS

b) Setting of the control to be applied to external providers and to the resulting output

c) Consideration of potential impact on the Supplier's capacity and control capacities of external providers

d) Verification of externally provided products and processes/services, and determination of other activities

8.4.2.1. ◆Method and extent of control - supplemental

Suppliers shall identify outsourced processes and specify the methods of controlling externally provided products and processes/services. The control methods shall include control based on performance and risk evaluation of products, materials, and services, and criteria and actions for changing the extent of development activities. If products are delivered directly from an external provider to JDI without processing or inspection by Supplier, Supplier shall instruct the external provider to perform appropriate management.

8.4.2.2. Statutory and regulatory requirements

Suppliers shall specify a process to ensure conformity of products and processes/services with statutory and regulatory requirements applicable in receiving countries, shipping countries, and destination countries specified by JDI. Where specifically directed by JDI, the Supplier shall also control its external providers.

8.4.2.3. Supplier quality management system development

Suppliers shall also demonstrate that QMS of its external providers that could affect products and processes/services conforms to ISO9001.

8.4.2.3.1. ◆Automotive product-related software or automotive products with embedded software

Suppliers shall implement and maintain processes to assure the quality of software embedded in its external provider products. The methodologies for evaluating software development shall be utilized to

evaluate its external provider software development processes. Supplier shall make external providers retain as quality records the information on analyzing the self-evaluation methods for software development skills by using prioritization based on the risks and potential impact on JDI.

8.4.2.4. External provider monitoring

Suppliers shall identify processes and criteria for evaluating performance of externally provided products and processes/services with respect to the following items a) through e).

a) Conformity of delivered product with requirements

b) Disruptions to JDI, including yard holds and shipment stops

c) Delivery schedule performance

d) Special status customer notifications related to quality or delivery issues

e) Dealer returns, warranty, field actions, and recalls

8.4.2.4.1. Second-party audit

Suppliers shall specify the criteria for determining the need, methods, frequency, and scope of second-party audits, and retain the results as quality records.

8.4.2.5. External provider development

Suppliers shall determine the priority, method, extent, and timing of developing its external providers using the following items a) through d) as inputs. However, in order to solve and improve the problems that have not been solved or the goals have not been achieved, the necessary measures should be implemented.

a) Performance issues of external providers

b) Results of second-party audits (see Section 8.4.2.4.1)

c) QMS certification status of external providers

d) Risk analysis results

8.4.3. Information for external providers

Suppliers shall validate the requirements with regard to the following items a) through f), and then communicate them to their external providers.

a) Products and processes/services to be provided

b) Approval of the following items 1) through 3)

1) Products and processes/services

2) Methods, processes, and equipment

3) Release of products and processes/services

c) Competence needed for personnel

d) QMS management system of the Supplier’s external providers

e) The implementation methods about supplier’s performance management and monitoring ,after integrating section8.4.2.4.

f) On-site validation at the Supplier’s external providers

8.4.3.1. ◆*Information for external providers - supplemental*

Suppliers shall inform its external providers of the requirements of all applicable laws and regulations and special characteristics of products and processes.

8.5. Production and service provision

8.5.1. Control of production and service provision

Suppliers shall maintain the following items a) through h) under controlled conditions for products and processes/services to be provided.

a) Documented information on characteristics of products, processes/services and activities to be performed, and target values to be achieved

b) Use of resources needed for monitoring and measurement

c) Appropriate monitoring and measurement of processes and output

d) Maintenance of necessary equipment (including manufacturing device and surveillance/measurement equipment, etc.) and environment for processes

e) Appointment of personnel with necessary competence

f) Validation of processes and regular review of validation methods (where verification based on output is difficult)

g) Actions to prevent human error

h) Release, delivery, and post-delivery activities

8.5.1.1. ◆*Control plan (CP)*

Suppliers shall formulate CPs, including not only parts but also bulk materials for all products at manufacturing sites. Family CPs shall be applied to bulk materials and similar parts using common manufacturing parts. CPs for pre-launch and mass-production shall show linkage, incorporate information from the design risk analysis, process flow charts, and output from the manufacturing process risk analysis, and include the following items a) through e). Where requested by JDI, measurements and conformity data collected during execution of pre-launch and mass-production CPs shall be submitted to JDI. Then, CP review、recognition，need JDI's approval.

a) Methods of controlling manufacturing processes, including verification of job set-ups

b) Validation of first-off and last-off parts

c) Methods of monitoring special characteristics control

d) Information on JDI's requirements

e) Reaction plans to be used when nonconforming products are detected or processes become statistically unstable or suffer capacity shortage

Suppliers shall review and update CPs as necessary when the following items f) through i) occur.

f) Nonconforming products are determined to have been shipped

g) When changes that could affect products, manufacturing processes, measurements, logistics, supply sources, production volume changes, and risk analysis occur

h) When JDI' complaints are made or associated corrective actions are implemented

i) At a set frequency based on risk analysis

8.5.1.2. ◆Standardized work - operator instructions and visual standards

Supplier shall create standardized work documents conforming to the following items a) through e).

a) Informed and understood by personnel responsible for performing the work

b) Legible

c) Presented in languages understood by personnel

d) Available for use at the specified work sites

e) Operation safety is considered

8.5.1.3. ◆Verification of Operation Set-ups

Suppliers shall implement the following items a) through e).

a) Verification when an initial run of a job, material changeover, or job change that requires a new set-up is performed

b) Specification of rules for set-up personnel

c) Verification based on statistical methods

d) Validation of first-off and last-off parts

e) Retention of records of process and product approval following set-ups and validation of first-off and last-off parts

8.5.1.4. ◆Verification after shutdown

Suppliers shall define and implement actions needed to ensure conformity of products with requirements after planned or unplanned shutdown.

8.5.1.5. ◆TPM (Total productive maintenance)

Suppliers shall specify and operate a TPM system that includes the following items a) through j).

a) Identification of process equipment necessary to produce a required amount of conforming products

b) Availability of replacement parts for equipment identified in a)

c) Provision of resources for machine, equipment, and facility maintenance

d) Packaging and preservation of equipment, tools, and gauges

e) JDI' requirements

f) Provision of documented maintenance objectives and performance as management review input

g) Specification and regular review of the corrective action methods to be used when objectives are not achieved

h) Use of preventive maintenance methods (For example, regular inspection or recondition, etc.)

i) Use of predictive maintenance methods (For example, monitor the deterioration status of loss-goods,etc.)

j) Regular overhaul

8.5.1.6. ◆Management of production tooling and manufacturing, test, inspection tooling and equipment

Suppliers shall establish and operate a management system for tools and gauges for production and service materials and for bulk materials, including the following items a) through g).

a) Maintenance and repair facilities and personnel

b) Retention and replacement

c) Set-ups

d) Tool change programs for perishable tools

e) Tool design and modification documentation with consideration given to engineering level of products

f) Tool repairs and revisions of standards

g) Identification of tools

8.5.1.7. ◆Production scheduling

Suppliers shall implement production scheduling such as just-in-time scheduling ,also need to consider the development cycles or library levels, as well as preventive preservation or correction, etc.to meet JDI' orders and demands.

8.5.2. Identification and traceability

Suppliers shall maintain the condition where output of all processes of providing products and processes/services are identifiable by appropriate means. Suppliers shall maintain the condition where records of factors that could affect quality of products and processes/services (e.g.: materials, work, inspection, equipment parameters) are traceable.

8.5.2.1. ◆Identification and traceability - supplemental

Suppliers shall conduct analysis of each requirement, and create and document traceability plans based on the levels of risks to JDI and importance of failures. Suppliers shall also define traceability systems, processes, and methods, including the following items a) through f), for each product, process, and manufacturing site.

a) Identification of nonconforming products and suspect products

b) Separation of nonconforming products and suspect products

c) Maintenance of ability to meet the response time requirements by JDI, laws, and regulations

d) Establishment of formats used to meet c)

e) Serialized identification of individual products specified by JDI' criteria and statutory and regulatory criteria

f) Extended application to externally provided products with characteristics specified by JDI, laws, and regulations

8.5.3. JDI Property

Suppliers shall identify, verify, protect, and safeguard JDI property provided for use in manufacture and

inspection or incorporation into products and processes/services.

When JDI property is found to be lost, damaged, or leaked, the Supplier shall immediately report the fact to JDI. Suppliers shall respond to additional requests such as submitting corrective action reports and claim expenses as necessary. In addition, these actions taken shall be recorded and retained.

8.5.4. Preservation

Suppliers shall appropriate preserve (identify, handle, prevent contamination of, package, store, transmit, transport, and protect) output of processes requiring management to ensure the provision of products and processes/services conforming with requirements.

8.5.4.1. ◆Preservation - supplemental

Suppliers shall appropriately manage preservation processes until reaching the destination specified by JDI. In addition, Suppliers shall establish, operate, and conduct regular evaluation for degradation of an inventory management system capable of "first-in-first-out (FIFO)" operation for preserved products. Obsolete products shall be preserved separately from current products in segregated locations.

8.5.5. Post-delivery activities

Suppliers shall determine the extent of post-delivery activities for products and processes/services, taking into consideration the following items a) through e).

a) Statutory and regulatory requirements

b) Possible undesirable consequences associated with products and processes/services

c) Nature, use, and intended lifetime of products and processes/services

d) JDI requirements

e) Feedback from JDI

8.5.5.1. ◆Feedback of information from service

Suppliers shall establish and operate processes to communicate information on service issues occurring outside of the Supplier.

8.5.5.2. ◆Service agreement with JDI

Where there is a service agreement, Suppliers shall implement the following items a) through c).

a) Verification of conformity of relevant service centers with applicable requirements

b) Verification of the effectiveness of special tools and measurement equipment

c) Implementation of educational training on applicable requirements for all service personnel

8.5.6. Control of changes

Suppliers shall conduct internal reviews for continued conformity with requirements even after changes are made to products and processes/services. In case of any change caused by a Supplier or its external providers, the Supplier shall submit the "Application for Change" (see Form 4(1) and "Matrix of Application for

Change" as Form 4(2)) together with necessary information and data to the JDI Procurement Division after the discussion with JDI's personnel responsible for the quality or design of Products.

Suppliers shall send the application to JDI at least i) nine (9) months for products which need JDI customer evaluation and/or approval such as In-vehicle related products; and ii) three (3) months for consumer related products; iii) twelve (12) months in case of discontinuation of production for both in-vehicle and consumaer products before the preferred date for approval from JDI. Any changes in manufacturing conditions shall not be implemented without JDI's prior approval. In the case of die-cast mold renewal, etc., where the interval until the next change application can be estimated in advance, please notify the conditions in writing when adopting the product.

In addition, Suppliers shall provide JDI necessary information and data specified in "Confirmation Sheet for Completion of Change" (see Form 4(3)) and "Matrix of Application for Change" (see Form 4(2)) within one (1) month after the change.

In addition, the results of change reviews, a set of change application documents, and actions taken shall be recorded and retained.

8.5.6.1. ◆Control of changes - supplemental

Suppliers shall specify a process to control changes that could affect product realization (including those caused by JDI and the Supplier's external providers). Suppliers shall implement the following items a) through g) when evaluating the impact of changes.

a) Determination of verification and validation activities to ensure conformity with JDI' requirements

b) Validation of changes before implementation

c) Recording of the results of related risk analysis

d) Retention of verification and validation records

e) Prior notification to JDI

f) Retention of records of JDI's prior approval

g) Additional verification and identification requested by JDI

8.5.6.1.1. ◆Temporary change of process controls

Suppliers shall specify a list of process controls, including inspection, measurement, test, and error-proofing devices. This list shall also include initially established backup and alternative methods.

Suppliers shall specify a process to manage the use of pre-approved alternative methods based on risk analysis. Standardized work instructions, etc. shall be used to give directions to enable personnel to utilize each alternative method.

The operation of alternative methods shall be regularly reviewed, including the following items a) and b), to verify the implementation of standardized work.

a) Audits focused on daily quality

b) Daily leadership management

Suppliers shall specify restart verification based on the period according to severity and confirmation of effective reinstatement of error-proofing devices and each process function, and record the result.

Suppliers shall maintain the condition where the use of these alternative methods is traceable.

8.6. Release of products and services

Suppliers shall conduct verification in a planned manner at an appropriate stage to confirm conformity of products and processes/services with requirements. The release of products and processes/services shall take place after agreed on verifications are conducted and completed without any problem. However, this shall not apply where the Supplier's management with the authority makes approval and JDI approval is also obtained. Suppliers shall record and retain the release information, including the following items a) and b).

a) Evidence of conformity with acceptance criteria

b) Traceability to the persons authorizing the release

8.6.1. ◆Release of products and services - supplemental

Suppliers shall specify planned arrangements such as verifications and approvals in CP/QC process charts, etc. to verify that the product and process/service requirements have been met. The planned arrangements for initial release of products and processes/services shall include all approvals necessary for products and services. Changes to products and processes/services following approval shall be made after completing the control of changes (see Section 8.5.6).

8.6.2. ◆Layout inspection and functional testing

Layout inspection and functional testing shall be performed for each product as specified in CP/QC process charts, and the results shall be maintained to enable their utilization in JDI' reviews. Layout inspection shall be conducted as the complete measurement of all product dimensions shown on all design records at the frequency specified by JDI.

8.6.3. ◆Appearance items

Suppliers shall prepare the following items a) through d) for the Supplier's products designated by JDI as "appearance items".

a) Appropriate resources, including lighting, for evaluation

b) Masters for color, grain, gloss, metallic brilliance, texture, distinctness of image (DOI), and haptic technology, as appropriate

c) Maintenance and control of appearance masters and evaluation equipment

d) Verification that personnel making appearance evaluations are competent and qualified to do so

8.6.4. ◆Verification and acceptance of conformity of externally provided products and services

Suppliers shall establish processes to ensure quality of processes, products, and services externally provided using at least one of the following methods a) through e). JDI may ask you to provide verification results.

a) Receipt and evaluation of statistical data provided by external providers

b) Acceptance inspection and/or testing (e.g.: sampling based on performance)

c) Second- and third-party assessments or audits of external providersites (with conformance of acceptable delivered products with requirements)

d) Part evaluation by a designated laboratory

e) Any other method agreed on with JDI

8.6.5. ◆Statutory and regulatory conformity

Suppliers shall confirm and provide evidence when JDI request , that the responsible departments and management methods required by laws and regulations, and products, processes, services provided from externally manutacturing Country, and arrival Country 's laws/regulations appointed by JDI, and other requirements in countries of manufacture and destination countries designated by JDI prior to releasing them into production flow.

8.6.6. ◆Acceptance criteria

Suppliers shall define acceptance criteria within its organization, and obtain approval from JDI if required. For attribute sampling data, the acceptance level shall be zero defects.

8.7. Control of nonconforming outputs

8.7.1.

Suppliers shall ensure that nonconforming output is identified and controlled to prevent their unintended use or delivery.

Suppliers shall take appropriate action based on the nature of the nonconformity and the influences of fitness or in nonconfirmity. This shall also apply to nonconforming products and services detected after delivery of products, during or after the provision of services.

Suppliers shall deal with nonconforming outputs using one or more of the following methods a) through d).

a) Correcting them to conform with requirements (refer section 8.7.1.4, section 8.7.1.5)

b) Segregation, containment, return, or suspension of provision of nonconforming products and services (refer section 8.7.1.2, section 8.7.1.3, section 8.7.1.7)

c) Notification to JDI,use《Quality and Safety Abnormal Liaison Letter》（Appendix：Format-7）(refer section 8.7.1.6)

d) Use《Special Purchase Application Form》 (Appendix: Format - 8)， to make the formal application for admission and the acquisition of permission. (refer section 8.7.1.1)

8.7.1.1. ◆JDI authorization for concession

When the product and manufacturing process are different from those been approved, Supplier shall obtain JDI's special use、permission. In addition, if reusing anyother components those except JDI's permission need

apply for special permission from JDI in advance. After approval, supplier shall keep a record of the expiry date or quantity of the license. After the expiration of the special mining period, the supplier shall verify that the requirements have been met. Appropriate identification should be carried out on specially procured

goods.

8.7.1.2. ◆*Control of nonconforming product - JDI-specified process*

Suppliers shall comply with applicable JDI-specified controls for nonconforming products.

8.7.1.3. ◆*Control of suspect product*

Suppliers shall ensure that products with unidentified or suspect status are classified and controlled as nonconforming products. Suppliers shall ensure that all manufacturing personnel receive training for containment of suspect and nonconforming products.

8.7.1.4. ◆*Control of reworked product*

When performing some rework of products or processes/services in which nonconformities were found, to make them comply with requirements, the Supplier shall conduct risk analysis to assess risks in the rework process, and obtain prior permission from JDI to rework the product. Suppliers shall specify a process to verify conformity with regular specifications in accordance with information specified in CP/QC process charts. Instructions for disassembly or rework, including re-inspection and traceability requirements, shall be available for utilization by the appropriate personnel. The quantity of reworked products, content of rework, date, and information on traceability shall be recorded and retained.

8.7.1.5. ◆*Control of repaired product*

For products and services that have been confirmed , suppliers shall conduct risk analysis, to assess risks in the repair process, repair products/services for nonconformities were found, in order to make them acceptable. ,and need obtain JDI's permission for the repair operation in advance .Suppliers shall specify a process in accordance with information specified in CP/QC process charts. Instructions for disassembly or repair, including re-inspection and traceability requirements, shall be available for utilization by appropriate personnel. The quantity of repaired products, content of repair, date, and information on traceability shall be recorded and retained.

8.7.1.6. ◆*Notification to JDI*

Suppliers shall immediately notify JDI in the event that nonconforming products have been shipped.

8.7.1.7. ◆*Nonconforming product disposition*

Suppliers shall specify a process to dispose of nonconforming products that cannot be reworked or repaired. Suppliers shall also verify that nonconforming products to be scrapped are rendered unusable prior to disposal. Suppliers shall not divert nonconforming products for other use without prior approval from JDI.

8.7.2.

Suppliers shall retain records for outputs not meeting requirements, including the following items a) through d).

a) Description of the nonconformity

d) Description of the actions taken

c) Description of concessions obtained

d) Identification of the authority deciding the action in respect of the nonconformity

9. Performance evaluation

9.1. Monitoring, measurement, analysis, and evaluation

9.1.1. General

The suppliers should conduct process surveys to verificate process capability and provide additional input to process control including management of specific characteristics,for all new regulatory manufacturing processes . However, if the engineering capacity is not very satisfactory, according to the pattern specifications, need do full inspection or other alternative methods. In addition, the company needs to maintain the manufacturing process capability (Cpk), manufacturing process performance (Ppk) for JDI's request. The supplier should comply with item from a) ~e, according to and using process flow chart, PFMEA, CP, QC process table.

a) What needs to be monitored and measured

b) Methods of monitoring, measurement, analysis, and evaluation needed to ensure valid results

c) When the monitoring and measuring shall be performed

d) When the results from monitoring and measurement shall be analyzed and evaluated

9.1.1.1. ◆Monitoring and measurement of manufacturing processes

Suppliers shall perform process studies on all new manufacturing processes to verify process capability and provide additional input for process control, including those for special characteristics. Suppliers shall maintain the results of manufacturing process capability (Cpk) and manufacturing process performance (Ppk) as specified by JDI' requirements. Suppliers shall comply with the following items a) through e), and implement process flow charts, PFMEA, and CP/QC process charts.

a) Measurement techniques

b) Sampling plans

c) Acceptance criteria

d) Records of actual measurement values and test results for variable data

e) Reaction plans and escalation process when acceptance criteria are not met

Significant process events, such as tool change or equipment repair, shall be recorded and retained.

Suppliers shall initiate reaction plans described in CP/QC process charts, etc. and implement containment of products and inspection of all products as necessary for characteristics that are either not statistically capable or are unstable. Suppliers shall implement a corrective action plan for process stability and get previous approval from JDI. Suppliers shall record the date of process change.

9.1.1.2. ◆Identification of statistical tools

Suppliers shall determine the methods of using statistical tools. Suitable statistical tools, should verify that

are included in the design risk analysis (e.g., DFMEA), process risk analysis (e.g.: PFMEA), and CP/QC process charts, etc.

9.1.1.3. ◆Application of statistical concepts

Statistical concepts (e.g.: variation, control (stability), process capability, and the consequences of over-adjustment) shall be understood and utilized by employees involved in the collection, analysis, and management of statistical data.

9.1.2. JDI satisfaction

Suppliers shall monitor the results of JDI evaluation on its needs and expectations to be fulfilled by the Supplier. Suppliers shall also determine the methods for obtaining, monitoring, and reviewing such information.

9.1.2.1. ◆JDI satisfaction - supplemental

Suppliers shall monitor JDI's satisfaction with the Supplier through continual evaluation of internal and external measurements. Performance indicators shall be based on objective evidence and include the following items a) through e).

a) Quality performance of delivered parts

b) Disruptions to JDI

c) Field returns, recalls, and warranty

d) Delivery schedule performance

e) Notifications from JDI on quality or delivery issues

Suppliers shall monitor the performance of manufacturing processes to demonstrate compliance with JDI' requirements for product quality and process efficiency.

9.1.3. Analysis and evaluation

Suppliers shall analyze and evaluate using the following information a) through g) by statistical methods.

a) Conformity of products and services

b) Degree of JDI satisfaction

c) Performance and effectiveness of QMS

d) Whether planning has been implemented effectively or not

e) Effectiveness of actions taken to address risks and opportunities

f) Performance of external providers

g) Need for improvements to QMS

9.1.3.1. ◆Prioritization

Effective using the data of quality, process and other data, analysis the progress of the purpose, and determine the priority measures to help improve JDI's satisfactory measures.

9.2. Internal audit

9.2.1.

Suppliers shall conduct internal audits at least once a year to confirm the following items a) and b) for its QMS.

a) Conformity with the following requirements 1) through 3)

1) Requirements specified by the Supplier

2) Requirements of QMS standards

3) Requirements of this Guideline

b) Effective achievement of planned results

9.2.2.

Suppliers shall ensure the implementation of the following items a) through f) as internal audits.

a) Formulation and maintenance of audit programs, including the frequency of implementing audits, audit methods, audit responsibilities, and rules and reporting methods for implementation plans. An audit program shall be included, taking into consideration the importance of processes and results of previous audits.

b) Determination of the audit criteria and scope for each audit.

c) Ensuring objectivity and fairness of the audit process.

d) Reporting of the audit results as management review input.

e) Ensuring implementation of audit reports, corrections, and corrective actions.

f) Recording and retaining the implementation results.

9.2.2.1. ◆Internal audit program

Suppliers shall specify an internal audit process. Suppliers shall formulate an internal audit program that covers the entire quality management system by utilizing quality management system audits, manufacturing process audits, and product audits. The audit program shall be prioritized based on risks, internal and external performance trends, and criticality of the processes. Where the Supplier is responsible for software development, software development capability assessments shall also be included in its audit program.

Suppliers shall review and adjust the frequency of audits based on occurrence of process changes, internal and external nonconformities, and JDI complaints. The effectiveness of the audit program shall be reviewed as part of management review.

9.2.2.2. ◆Quality management system audit

Supplier shall audit its quality management system to verify conformity to QMS standards and this Guideline using the process approach. Suppliers shall audit all processes within three (3) years. For JDI-specific requirements, effective sampling shall be conducted.

9.2.2.3. ◆Manufacturing process audit

Suppliers shall audit all shifts (including shift handovers) and manufacturing processes within three (3)

years to determine their effectiveness and efficiency. In manufacturing process audits, Suppliers shall determine whether process risk analysis (e.g.: PFMEA), CP/QC process charts, and SOP, etc. are effectively utilized or not. Where requested by JDI, Suppliers shall follow the instructions with regard to manufacturing process audits.

9.2.2.4. ◆Product audit

Suppliers shall audit products at appropriate stages of production and delivery to verify conformity with specified requirements. Where requested by JDI, Suppliers shall follow the instructions with regard to product audits.

9.3. Management review

9.3.1. General

Suppliers shall review the organization's QMS, at planned intervals, to ensure continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of the organization.

9.3.1.1. ◆Management review - supplemental

Management reviews shall be conducted at least annually. The frequency of management reviews shall be increased based on risks to compliance with JDI' requirements resulting from internal or external changes that could affect QMS and performance-related issues.

9.3.2. Management review inputs

Management reviews shall be planned and carried out taking into consideration the following items a) through f).

a) Implementation status of instructions from previous management reviews(see Section 9.3.3)

b) Changes in external and internal issues related to QMS(see Section 4.1)

c) Information on the performance and effectiveness of QMS with regard to the following items 1) through 7)

1) JDI satisfaction and feedback from interested parties(see Section 9.1.2)

2) Status of quality objectives(see Section 6.2)

3) Conformity status of each process, product, and service(see Section 8.6.1, 9.1.1)

4) Nonconformity and corrective action(see Section 10.2)

5) Monitoring and measurement results(see Section 9.1.1)

6) First-, second-, and third-party audit results(see Section 9.2)

7) Status of external providers(see Section 8.4.1)

d) Adequacy of resources(see Section 7.1.2, 7.1.3)

e) Effectiveness of actions taken to address risks and opportunities (see Section 6.1)

f) Opportunities for improvement(see Section 10)

9.3.2.1. ◆Management review inputs - supplemental

Management review inputs shall include the following items a) through l).

a) Due to not meet internal and external cost (see section 8.6.1, 9.1.2.1)

b) Process effectiveness (see Section 5.1.1.2)

c) Process efficiency (see Section 5.1.1.2)

d) Product conformity (see Section 8.6.1, 10.2)

e) Manufacturing feasibility for new manufacturing feasibility ,new products, and some changes (see Section 7.1.3.1)

f) JDI satisfaction (see Section 9.1.2, 9.1.2.1)

g) Review of performance against maintenance objectives (see Section 8.5.1.5-f)

h) Warranty performance (see Section 10.2.5)

i) JDI scorecards result (see Section 9.1.2.1)

j) The potential field failures (see Section 6.1.2.1)

k) Actual field failures and their impact on safety and environment (see Section 10.2.6)

l) summary results of measurements at specified stages during the design and development of products and processes, as applicable. (See Section 8.3.4.1)

9.3.3. Management review outputs

Management review outputs, including decisions and actions related to the following items a) through c), shall be retained as quality records.

a) Opportunities for improvement

b) Any need for changes to the quality management system

c) The necessity of additional resources

9.3.3.1. ◆Management review outputs - supplemental

Suppliers shall specify and implement action plans when JDI performance targets are not achieved.

10. Improvement

10.1. General

Suppliers shall determine and then select and implement opportunities for improvement to meet JDI requirements and improve JDI satisfaction. The improvements shall include correction, corrective action, continual improvement, breakthrough change, innovation, and re-organization.

a) Improvement of products and services to meet requirements as well as to address future needs and expectations

b) Correction, prevention, and reduction of undesirable effects

c) Improvement of the performance and effectiveness of QMS

10.2. Nonconformity and corrective action

10.2.1.

Suppliers shall implement the following items a) through f) to react to complaints and nonconformity with QMS, etc. In additional, when JDI requests to use 《the NG products report》 (Appendix: Format - 5 (1)) to

write the response book, should use 《the Report on Problem Solution》 (Appendix: Format - 6 (1)), and report corrective measures with《Why Why Analysis》 (Appendix: Format - 6 (2)) when necessary.

a) Ensuring implementation of the following items 1) and 2)

1) Taking actions to control and correct the nonconformity

2) Dealing with the consequences from nonconformity

b) Evaluating the need for actions to eliminate the causes of the nonconformity by implementing the following items 1) through 3) in order that it does not recur or occur elsewhere

1) Reviewing and analyzing the nonconformity

2) Determining the causes of the nonconformity

3) Determining if similar nonconformities exist, or could potentially occur

c) Implementing actions needed according to the impact identified

d) Reviewing the effectiveness of corrective actions taken

e) Updating risks and opportunities determined during formulation of plans, if necessary

f) Making changes to QMS, if necessary

10.2.2.

Suppliers shall record and retain the information on the following items a) and b).

a) Nature of the nonconformity and subsequent actions taken

b) Results of corrective actions

10.2.3. ◆Problem solving

Suppliers shall specify a process for problem solving, including the following items a) through f). Where separately instructed by JDI, however, the Supplier shall follow the instructions.

a) Corrective measures for various types and scale of problems (e.g.: new product development, current manufacturing issues, field failures, audit findings)

b) Containment, interim actions, and related activities necessary for control of nonconforming outputs (see Section 8.7)

c) Root cause analysis, methodology(e.g.:Characteristic Main Factor Diagram, FTA, Why Why analysis,etc.) used, analysis, and results

d) Implementation of systemic corrective actions, including consideration of the impact on similar processes and products

e) Verification of the effectiveness of implemented corrective actions

f) Reviewing and, where necessary, updating the appropriate documented information (e.g.: PFMEA, CP/QC process charts)

10.2.4. ◆Error-proofing

Suppliers shall specify a process to determine the use of error-proofing methodologies. Details of the methods adopted shall be specified in the process risk analysis (e.g.: PFMEA), and test frequencies shall be described in CP/QC process charts. The process shall include the plan, action of confirmation experiment

implementation for the error-prevent device whether faulty or not ,and the record shall be kept.Standard samples, when used in inspection of error-proofing devices, shall be identified, controlled, verified, and calibrated. Reaction plans shall be created for error-proofing device failures.

10.2.5. ◆Warranty management systems

When JDI requests a Supplier to provide warranty for its products, the Supplier shall implement warranty management processes. Suppliers shall include in the process a method for warranty part analysis, including NTF (No Trouble Found). Where separately instructed by JDI, however, the Supplier shall follow the instructions.

10.2.6. ◆JDI complaints and field failure test analysis

Suppliers shall perform analysis on complaints from JDI and field failures, including any returned parts, and shall initiate problem solving and corrective actions to prevent recurrence. Within 24 hours after announce from JDI, please submit the primary response including the details of the defect, the cause and the countermeasures against the outflow. Also, please submit a final response within 5 days. Depending on the content of the problem, the reply deadline may be set individually. Where requested by JDI, Suppliers shall perform analysis of the interaction of embedded software within the system of the final products of JDI and JDI customers. Suppliers shall communicate the results of testing/analysis to JDI and interested parties within the Supplier. JDI may request a meeting or joint analysis, or both, to confirm the progress of the investigation/analysis and to confirm the details of the report, including JDI, JDI's customers, and external providers.

10.3. Continual improvement

Suppliers shall continually improve the suitability, adequacy, and effectiveness of QMS. Suppliers shall consider the results of analysis and evaluation, and the outputs from management review, to determine if there are needs or opportunities that shall be addressed as part of continual improvement.

10.3.1. ◆Continual improvement - supplemental

Suppliers shall specify a process for continual improvement, including the following items a) through c). Continual improvement shall be implemented once manufacturing processes are statistically capable and stable, and when product characteristics are predictable and meet JDI' requirements.

a) Identification of the methodology used, objectives, measurement, effectiveness, and documented information

b) Manufacturing process improvement action plans with emphasis on the reduction of process variation and waste

c) Risk analysis (e.g.: FMEA)

11. Environment-related Substance Management

Suppliers shall comply with the "Japan Display Green Procurement Guideline" for environment-related

substances contained in products and processes/services delivered to JDI.

Suppliers shall be especially sure to report substances used for an application of new Product and change in it in accordance with the “Japan Display Green Procurement Guideline”.

In addition, Suppliers shall maintain the relevant data so as to provide it on JDI’s request for verification on the contents during any on-site audit during the Supplier’s manufacturing process.

* The latest edition of the “Japan Display Green Procurement Guideline” and “Environment-related report forms” are available on Japan Display Inc.’s website (Company > Procurement > Green Procurement) at:

http://www.j-display.com/company/procurement/supply.html

12. Work environment

Suppliers shall maintain the environment, mainly work sites, in a clean and well-arranged condition by performing 5S (organizing, arranging, cleaning, sweeping, and disciplining) and 3T at all times.

12.1. Cleanliness management

When airborne particles in the air affect quality of products/services, the Supplier shall perform work in an environment in which the air cleanliness is controlled within the range of the required cleanliness class (e.g.: clean rooms, clean benches). In the cleanliness management environment, about clothing (dust-free clothing, dust-free shoes, gloves, etc.) or transfer trolley etc., the risk of foreign body mixing or dust due to material or shape is analyzed before importing. In addition, the cleanliness evaluation method shall be in accordance with ISO 14644-1:2015, and the cleanliness shall be monitored/measured and recorded at a frequency of twice a day.

12.2. Static electricity management

Suppliers shall define and implement the rules of static electricity measures based on the content of the following items a) through d) to prevent the breakage, degradation, and lowered reliability of products from occurring. Static electricity measures shall be applied to all necessary processes, from acceptance of parts to inspection/shipping.

a) Basic concept of static electricity management

1) Prevent the generation of static electricity

2) Prevent static electricity charges

3) Prevent static electricity discharge

4) Shield from external static electricity

b) Main anti-static measures

1) Appropriate temperature / humidity and airflow management

2) Installation of conductive flooring, conductive table/mat and static eliminator, etc.

3) Use of conductive shoes, wrist straps, antistatic trays, etc.

c) Setting the areas for static electricity measures

The measures shall be implemented by setting the areas requiring static electricity measures. Where

reviewing the areas is necessary due to floor layout changes, etc., it shall be performed based on the rules of static electricity measures.

d) Confirming static electricity measures

Static electricity measures shall be confirmed according to the level of the measures by defining inspection items and inspection period, and the results shall be recorded. Where work benches and equipment, etc. are moved or floor layout is changed, inspection shall be performed again.

12.3. Environment management

Suppliers shall manage items in each environment at the time of work, transportation, and retention to meet predefined temperature/humidity conditions according to the characteristics of the items concerned. Care should be taken not to rapidly change temperature/humidity to prevent condensation, etc. from forming. Sufficient consideration shall also be given to factors that affect degradation, including direct sunlight and corrosive gas, etc.

13. Documents to be Submitted related to Quality Assurance

Suppliers shall submit the relevant documents for verifying implementation of quality assurance activities for products and processes/services. The type, timing and frequency of the documents to be submitted shall be referred to in Attachments.

14. Management and Control of Limit Samples

In cases where the inspection items specified in the Purchase Specification include the items which cannot quantify the acceptance criteria such as sensory inspection, samples for such criteria (“Limit Sample”) shall be discussed and determined between Supplier and JDI. The Limit Sample itself shall be deemed as the indicator of the acceptance criteria during the effective period of such Limit Sample. JDI will discuss with the Supplier whether or not to set the Limit Sample for any items not specified in the Purchase Specification

JDI may request the Supplier to cooperate on creating limit samples. Each Limit Sample is created at least in duplicate and each company shall keep one sample after mutual confirmation. All the Limit Samples confirmed as above must be affixed with labels or a Limit Sample cover-page issued by JDI to indicate the validity period and control number. They must be printed on its case or a plastic vinyl bag in case of difficulty due to size.

Unless otherwise specified, the validity period of each Limit Sample shall be two (2) years from its registration. Any Limit Sample of which the validity period has expired shall be discarded. If there remains a need to set a Limit Sample, new Limit Samples shall be set or the existing Limit Sample shall be renewed. Renewal of the Limit Sample shall be made only if no issue is found and that fact is confirmed by the related department. Supplier shall replace the label or cover-page for renewed Limit Samples with a new one.

JDI may request the Supplier to reproduce the Limit Sample if any aging or damage occurs during the period of validity of such Limit Sample. In addition, the Supplier shall notify and confirm with JDI in advance if any Limit Sample established between the Supplier and external providers might affect the quality of the Products to be supplied to JDI.

15. Confirmation of Products

While assuming that Supplier Products meet JDI quality requirements, JDI may conduct conformation to ensure the quality of the Products purchased.

15.1 Incoming inspection

JDI will conduct incoming inspections with the method and criteria determined for each Product. Suppliers shall take appropriate actions such as replacement or rework against all applicable lots which cannot pass the incoming inspection and then identify the root cause promptly and take actions to prevent recurrence.

15.2 Joint Inspection at the Supplier's site

JDI may request the Supplier to carry out a joint inspection (i.e. on-site quality inspection of actual Products) for newly delivered Product, or in case any critical problem occurs at the Supplier's facilities. In this case, JDI will inform the Supplier of the schedule in advance.

15.3 Joint Inspection at designated place

JDI may request Suppliers to conduct a joint inspection with the Supplier's specialized engineer at JDI's designated place for an early solution to the problem. In this case, JDI will inform the Supplier in advance and discuss it with them.

16. Supplier Visit to JDI Site

Suppliers shall submit to JDI the Letter Agreement attached as Form 2 ("Letter") with confirmation of each provision in the Letter.

Suppliers shall clearly state the schedule, reason, department of visit and the name of visitors in the Form 3 ("Application for On-Site Visit and its Identification") and submit to JDI in advance together with the related materials. Suppliers shall ensure in advance that those who plan to visit the JDI site understand and comply with all the provisions of the Letter Agreement. For smooth entry checks at the JDI site, JDI asks that the Supplier let them bring the hard copy of those documents including the Letter and submit them to a responsible staff member of the destination department of JDI.

17. Implementation of Quality Audit at Supplier

17.1 Objectives of Quality Audit

For the purpose of continual improvement of the quality of Products, JDI may conduct a quality audit to check if the Supplier's quality assurance activities and their results are being consistent with the quality objectives, and if the Supplier's systems and processes are adequate to achieve the quality requirements.

17.2 Types of Audit

a) Audit for New/Change Qualification

- Audit to confirm validation of new plant or novel system or manufacturing process with significant

changes

b) Regular Audit

- Audit to confirm Supplier maintenance of the audited items at the same level or more than those previously audited for the qualified plant or process

c) Non-periodical audit

- Audit to confirm process (including processes of external providers) for which serious quality troubles have occurred or could occur to reduce risks to the process concerned

d) Special Audit

- Audit to confirm the risk until third-party certification is resumed for organizations whose certification continuation has become difficult due to suspension or cancellation in the quality management system.

17.3 Audit Procedure

1) Adjustment of Audit Schedule

In the case of conducting an audit, JDI will send a prior notice to the Supplier and determine the schedule through the discussion.

2) Self-Check with Quality Audit Check Sheet

Suppliers shall conduct self-check with the quality audit check sheet provided by JDI and return it prior to the audit. In order to facilitate the audit, all the corresponding documents and evidence should be entered in the “Comments” column on the check sheet. Supplier shall enter “N/A” in the corresponding “Comments” column for any question on the check sheet not applicable to its facility. In a Special Audit conducted mainly to solve trouble, however, the check sheet may not be used.

3) Implementation of Quality Audit

The following shall be confirmed through the Quality Audit:

- Existence of documents and evidence of implementation based on the check sheet;
- Status of implementation of specified quality control process through acceptance to shipment of Products; and
- Any other items to be confirmed depending on the purpose of audit.

4) Judgment and Disposition

Based on the audit results, the JDI audit team will notify the Supplier of its judgment of acceptance/failure to pass and measures if necessary. However, any items which cannot be judged immediately shall be reported to the Supplier later after further discussion is carried out. Outcome of Quality Audit would cause material impact on the continuation of the transaction with JDI.

5) Corrective Action

If any negative findings are identified through the quality audit, Suppliers shall take corrective action immediately and report the evidence to the JDI audit team.

6) Follow-Up

Any corrective actions reported to JDI shall be confirmed through it effectiveness and continuity.

18. Evaluation on Supplier

JDI may assess and rank a Supplier with the quality results of delivered Products (quality during incoming inspection, in the manufacturing process or on the market) and actual Turn Around Time (TAT) during which the Supplier responded to requests from JDI to answer about the quality problems. Suppliers may be requested to submit any improvement plan, and hold a quality meeting or conduct a Special Audit based on the results of such assessments.

Where, as a result of comprehensively examining quality, cost, and delivery, the Supplier is deemed to be extremely inferior when compared to other competitive suppliers, JDI may take measures such as suspension from quotation, etc.

19. Regarding Packaging Specification

Suppliers shall take the following actions for packaging specifications of the Products. Suppliers shall inform JDI of any issue for such actions prior to shipment of Products manufactured by volume production if any.

19.1. Packaging Specification

- Suppliers shall conduct packaging test based on the packaging method of the delivery specification.
- Suppliers shall follow JDI packaging specification specified in the purchase drawings (specification) provided by JDI if any.
- Suppliers shall use the materials to be attached on Products (e.g., tape core, lot tag label) with a dust- free effect.
- Suppliers shall use trays with anti-static effects for packaging of Products if any.
- Suppliers shall use the materials or measures for packaging specifications to prevent causing corrosive gas.

19.2. Precaution for Packaging

Suppliers shall display the following items a) and b) on the package of the Products:

a) Information for Quality Assurance

- Name of Manufacturer
- Material/Parts Name
- Materials/Parts Code
- Identification (e.g.: Manufacturing Lot No.)
- Quantity
- Number of Packages
- Inspection Passed Stamp and Inspection Date
- Expiration Date

b) Information for Freight Handling

19.3. Others

a) Suppliers shall inform JDI of any note for JDI handling in advance if any.

b) Suppliers shall perform verification on tolerable packaging for transportation (vibration, shock test, transportation test), selection of forwarder and advance guidance on handling to prevent any accident of transportation from occurring.

20. Management of Manufactured Product

Suppliers shall take the following actions for quality management after the start of manufacturing Product.

20.1 Initial Production Control

Prior to starting production of new or changed products, Suppliers set the target value of manufacturing process performance (Ppk) for important processes including special characteristics and carry out improvement activities until stable production that meets the target value can be achieved at an early stage. Until stable production (maintaining Ppk> 1.67 for important control dimensions related to vehicles) is achieved, perform special control such as 100% inspection. At the same time, carry out inspections based on the purchase specifications such as dimensions, materials, functions and performance tests of the produced products.

20.2 First Shipment Product

Suppliers shall identify mark/label on each shipping container in according with designed identification shall be made on JDI's request basis and attach inspection certificate for the first shipment of new Products.

If Suppliers have any questions about the requirements when shipping the first product, contact JDI in advance.

In some cases, JDI may request the same response of "initial production control" mentioned above for the initial product after the corrective action is completed at Suppliers, so please cooperate in responding in accordance with our instructions.

20.3 Safe Launch

JDI may ask Suppliers to provide "safe launch" based on JDI's customer's request. Specifically, JDI may ask to strengthen the outgoing inspection (ex. 100% inspection → W inspection, Sampling inspection → 100% inspection) for a certain period after the start of mass production. Please cooperate, if JDI request separately.

21. PPAP（Production Part Approval Process）

If required from our side, Suppliers shall prepare and submit samples, test and inspection data, drawing, and other documents to demonstrate that our requirements are met. Regarding the following items, JDI requests the submission and retention of materials based on AIAG PPAP manual.

1) Case of approving Products relating vehicle

2) Case of change application of Products relating vehicle

JDI specify the necessary data and materials as submissions from Suppliers each time. Suppliers shall submit to JDI as soon as the materials are ready.

- Design documents (including Composition survey of Parts and Materials)
- FMEA (D-FMEA/P-FMEA)
- Process Flow Chart
- CP(Control Plan)、QC Flow Chart
- MSA results
- Dimensional measurement results, material and performance test results
- Initial process survey
- Qualified laboratory documents
- Sample Products
- Master Sample
- ”Part Submission Warrant （PSW）“ （see Form 9)

21.1 Re-qualification

JDI may ask Suppliers to take additional actions for “Re-qualification” based on JDI customer’s request. Specific actions include all dimensional measurements shown in the drawings and reliability tests described in the purchase specifications. Please cooperate, if JDI request separately.

22. Sample Storage Management

Suppliers shall store and manage Samples and Pay sufficient attention to environmental deterioration and destruction such as temperature and humidity, light, gas and static electricity, as same as Products.

22.1 Master Sample

The Suppliers shall store the Master Sample in accordance with the requirements (frequency, quantity, period) stipulated in the Purchase Specification. Master samples shall be acquired from the same production lots of sample production parts for new or changed products. When requested by a customer or when a quality problem occurs, we may request a measurement or test using a master sample.

22.2 Analysis Sample

JDI may request Suppliers to analyze returned products from JDI customer. Suppliers shall store samples used for analysis, including those that have been disassembled or disassembled, for 3 months from the date of analysis. If the storage period needs to be extended at the request of JDI customers, JDI will request separately. If JDI need to reconfirmation the samples, JDI request to return samples.